Chapter 1
Value Creation With Information-Based Products and Services

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ABSTRACT

This chapter provides an overview of how scholarly publishing and information-based services have evolved over the last 20 years, and how these activities are fundamental to enabling scientific research and education to improve on the key performance indicators of speed, quality, contextualization, discoverability, enablement of creativity and innovation, and developing the talent pipeline. The authors delve into the exciting prospects for value creation using new business models and patterns of cooperation and co-innovation between stakeholders.

INTRODUCTION

This first chapter serves to describe how technology has enabled and triggered transformation in the science eco-system, what role scholarly publishing has played, and how both of these things are likely to change in the next decade. Digital Technologies have not just provided new functionality in products and services, but

also enabled completely new uses, and empowered the consumers of the information to have a more direct impact along the whole lifecycle of knowledge creation, and associated educational practices and pathways. The next period will be more driven by business model innovation and re-imagining the roles of knowledge lifecycle participants.

Publishers exist to help participants in a community of practice with their information needs, and through their products and services, contribute to the performance of the communities' activities, outcomes, and impacts.

For science, technology and medicine (STM) communities in particular, we are looking at key performance dimensions:

- Speed of Knowledge creation
- Quality (and integrity) of Knowledge
- Contextualization of Knowledge
- Discoverability, Accessibility, and Usability
- Enablement of creativity (supporting idea generation for hypotheses etc)
- Developing the talent pipeline
- The development and monetization of Intellectual Capital

We believe that:

- there is a huge need for a more significant impact of science on society,
- there is a huge need for much more effective and efficient talent development through education, and finally,
- what we currently call scholarly publishing will undergo rapid change to serve the needs of the various communities and stakeholders involved.

SCHOLARLY PUBLISHING DEFINED

Scholarly (STM=Science-Technology-Medicine) publishing has been around for a very long time. Like all publishing activities, it focuses on serving a specific set of audiences and communities with their specific information needs. These needs vary significantly based on audience:

- the core: Researchers, Students and their institutional infrastructure (Universities, Institutes, Corporations)
- the periphery: funding organizations, policy makers, consultants, professionals, and their institutions
- the general public

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